

AMENDMENTS TO THE SPECIFICATION

Please amend the Title as follows:

METHOD AND ARRANGEMENT~~APPARATUS~~ FOR POWER CONTROL IN A
RADIO COMMUNICATION SYSTEM

Please insert the following new paragraph on page 1, at line 1:

Cross-Reference To Related Applications

This application is a U.S. national phase application of International Application No. PCT/EP2004/053502, filed December 15, 2004, which claims priority to United Kingdom Application No. 0329625.8, filed December 23, 2003, the contents of which are hereby incorporated by reference into the present disclosure in their entirety.

Please amend the paragraph beginning on page 3, line 13, as follows:

Hence, an improved method and arrangement~~apparatus~~ for power control in a radio communication system would be advantageous and in particular a system wherein the abovementioned disadvantage(s) may be alleviated would be advantageous.

Please amend the paragraph beginning on page 3, line 20, as follows:

Statement Summary of the Invention

Accordingly, the Invention seeks to preferably mitigate, alleviate or eliminate one or more of the above mentioned disadvantages singly or in any combination.

Please amend the paragraph beginning on page 4, line 8, as follows:

In accordance with a second aspect of the present invention there is provided an arrangement~~apparatus~~ for power control in a communication system employing a Downlink Shared Control Channel (DSCH) and a Forward Access Control Channel (FACH), the

arrangementapparatus comprising: means for applying power control on the Downlink Shared Control Channel; means for deriving power control information from the power control on the Downlink Shared Control Channel; and means for applying to the Forward Access Control Channel the derived power control information from the power control on the Downlink Shared Control Channel in order to produce power control on the Forward Access Control Channel.

Please amend the paragraph beginning on page 5, line 24, as follows:

One method and arrangementapparatus for power control in a radio communication system incorporating some embodiments of the present invention will now be described, by way of example only, with reference to the accompanying drawing(s), in which:

Please amend the paragraph beginning on page 6, line 9, as follows:

FIG. 4 shows a block schematic diagram illustrating an power control arrangementapparatus incorporating an embodiment of the present invention;

Please amend the paragraph beginning on page 6, line 29, as follows:

The following preferred embodiment of the present invention will be described in the context of a UMTS Radio Access Network (UTRAN) system operating in TDD mode. Referring firstly to FIG. 1, a typical, standard UMTS Radio Access Network (UTRAN) system 100 is conveniently considered as comprising: a terminal/user equipment domain 110; a UMTS Terrestrial Radio Access Network domain 120; and a Core Network domain 130.

Please amend the paragraph beginning on page 11, line 11, as follows:

Referring now to FIG. 4, a power control arrangementapparatus 400 for implementing an embodiment of the present invention includes a module 410 for deriving DSCH power control information, and a module 420 for receiving the DSCH-derived power control information and for

performing in dependence thereon FACH power control. Whilst not inapplicable for Frequency Division Duplex (FDD) operation, this scheme is particularly well suited to TDD operation. This is because in TDD the DSCH may be used in the same UE state as the FACH (this is called 'Cell FACH state') without the need to allocate dedicated resources (as described in 3GPP technical specification document 25.331, available from the 3GPP website). In other words, a UE can be served on the DSCH, power information can be extracted using the DSCH power control mechanism, and then the UE can be rapidly and easily served on the FACH, exploiting the power information gleaned from the DSCH operation. DSCH operation in Cell FACH state is not possible for FDD in a UMTS communication system; the UE must move to Cell DCH state where it is granted dedicated resource, in which it may receive DSCH (and FACH too, although this requires that the UE has the capability to decode three CCTrCHs at the same time).

Please amend the paragraph beginning on page 12, line 17, as follows:

Referring now to FIG. 5, in ~~a preferred one~~ embodiment of the present invention the FACH blocks are queued in one of n queues 5101, 5102...510n, according to the CCTrCH that the targeted UE is listening to. Each CCTrCH may employ up to k_i spreading factor 16 (SF16) codes. The code sets allotted to each CCTrCH are disjoint; the total number of codes over all CCTrCHs must be less than or equal to 16.

Please amend the paragraph beginning on page 20, line 27, as follows:

It will be understood that the method and ~~arrangement~~apparatus for power control in a radio communication system described above provides a number of advantages including one or more of the the following advantages:

Please amend the paragraph beginning on page 21, line 25, as follows:

Embodiments of the invention can be implemented in any suitable form including hardware, software, firmware or any combination of these. The invention may optionally be implemented at least partly as computer software running on one or more data processors and/or

digital signal processors that read from memory instructions and data for implementing embodiments of the invention. In this document, the terms “computer program product” and “computer-readable medium” refer to any medium, e.g., memory, that may store instructions for implementing embodiments of the invention. The elements and components of an embodiment of the invention may be physically, functionally and logically implemented in any suitable way. Indeed the functionality may be implemented in a single unit, in a plurality of units or as part of other functional units. As such, the invention may be implemented in a single unit or may be physically and functionally distributed between different units and processors.